

Silicon Ranch Corporation proposes to develop, finance, construct, own, and operate two solar plants (total capacity of 6 MW DC) in Meridian, MS to support renewable energy and energy security goals of the Department of the Navy (DON). The energy and associated environmental attributed produced by these plants will be sold to Tennessee Valley Authority (TVA) under two separate 20-year power purchase agreements (PPA). The individual plants will be sized at 1 MW DC and 5 MW DC, respectively. The In-Kind Consideration for the project is described further under Attachment H, but in short, controls and equipment will be installed so that the solar PV arrays (6 MW DC) will be integrated into the NAS Meridian and EMEPA distribution system and TVA diesel generators on the base to supplement power to the base in critical emergency situations and extend diesel fuel utilization. In addition to the 6 MW DC, Silicon Ranch will develop, finance, construct, own, and operate another separate, off-base utility scale array (52.5 MW AC) which will be located a few miles south of the base and the output and environmental attributes of this solar facility will be sold to Mississippi Power Company via a long-term PPA. Additional infrastructure via new power line will be constructed from this array's interconnection back to the base in order to supply a potential new electric feed in the future, adding another benefit of redundancy for the NAS Meridian base.

Key elements of the 6 MW DC project include:

Location: The arrays will occupy approximately 38.21 acres of DON property at Naval Air Station (NAS) Meridian and will be located at the "Rabbit Road" section of the base south of Fuller Road and west of the air field.

Date to be in-service: The current schedule estimates commercial operation of the 6 MW DC, and the IKC to be integrated by mid 2018.

Capacity: The design of the project facilities is 1 MW DC and 5 MW DC (6 MW DC total to be co-located).

Generation Technology: The solar power plant design currently contemplated is built with First Solar thin-film modules (First Solar Series 4) and First Solar's proprietary mounting system along with Power Electronics (FS 2150CH) inverters. This fixed-tilt design has been selected to optimize performance of the plants. Silicon Ranch has chosen this technology set for its proven track record, high performance to value ratio, and the team's experience in deploying this technology across varied geographies.



First Solar Series 4™ PV Module

ADVANCED THIN FILM SOLAR TECHNOLOGY



INDUSTRY BENCHMARK SOLAR MODULES

As a global leader in PV energy, First Solar's advanced thin film solar modules have set the industry benchmark with over 10 gigawatts (GW) installed worldwide and a proven performance advantage over conventional crystalline silicon solar modules. Generating more energy than competing modules with the same power rating, First Solar's Series 4™ and Series 4A™ PV Modules deliver superior performance and reliability to our customers.



PROVEN ENERGY YIELD ADVANTAGE

- Generates more energy than conventional crystalline silicon solar modules with the same power
- Superior temperature coefficient resulting in greater energy yield in typical field operating temperatures
- Superior spectral response resulting in a proven energy yield advantage in humid environments
- Anti-reflective coated glass (Series 4A™) enhances energy production



ADVANCED PERFORMANCE & RELIABILITY

- Long-term power-output warranted for 25 years
- Compatible with advanced 1500V plant architectures
- Highly predictable energy in all climates and applications
- Independently certified for reliable performance in high temperature, high humidity, extreme desert and coastal environments based on accelerated life and stress tests

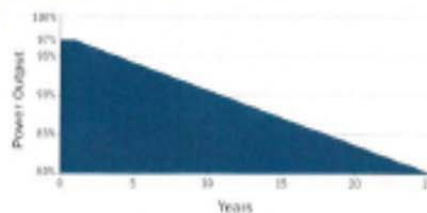


CERTIFICATIONS & TESTS

- PID-Free, Thresher Test, Long-Term Sequential Test¹, and ATLAS 25+^{1,2}
- IEC 61646 1500V, IEC 61730 1500V, CE
- IEC 61701 Salt Mist Corrosion, IEC 60068-2-68 Dust and Sand Resistance
- ISO 9001:2008 and ISO 14001:2004
- UL 1703 and ULC 1703 Listed Class B Fire Rating (Class A Spread of Flame)
- CSI Eligible (CA-USA), FSEC (FL-USA), MCS (UK), CEC Listed (Australia), JET (Japan)³, SIL (Israel)⁴, InMetro (Brazil)⁵



MODULE WARRANTY⁹

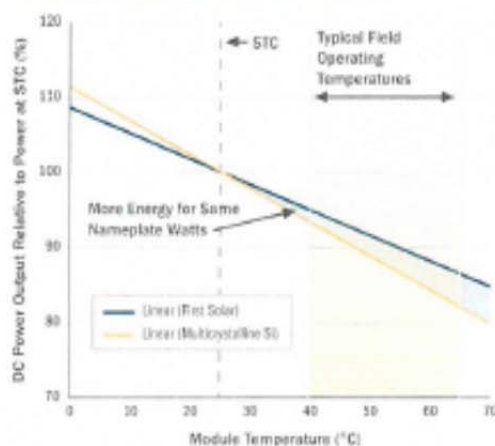


- 25-Year Linear Performance Warranty
- 10-Year Limited Product Warranty

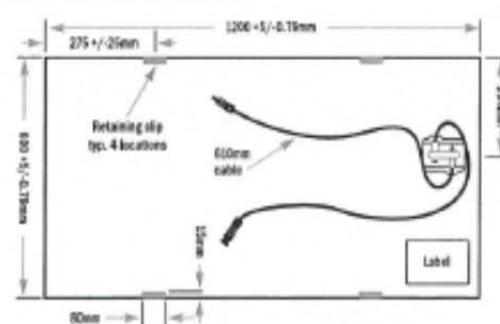
FIRST SOLAR SERIES 4™ PV MODULE

MECHANICAL DESCRIPTION		MODULE NUMBERS AND RATINGS AT STC TM							
Length	1200mm	NOMINAL VALUES		FS-4109-1 FS-41054-2	FS-4301-2 FS-41074-2	FS-4110-2 FS-41104-2	FS-4112-2 FS-41124-2	FS-4115-2 FS-41154-2	FS-4117-2 FS-41174-2
Width	600mm								
Weight	12kg	Nominal Power (± 5%)	P _{max} (W)	105.0	107.5	110.0	112.5	115.0	117.5
Thickness	6.8mm	Voltage at P _{max}	V _{max} (V)	67.8	68.6	69.4	70.2	70.5	71.2
Area	0.72m²	Current at P _{max}	I _{max} (A)	1.55	1.57	1.59	1.60	1.63	1.65
Leadwire	2.5mm², 600mm	Open Circuit Voltage	V _{oc} (V)	86.0	86.6	87.2	87.7	87.8	88.2
Connectors	MC4®	Short Circuit Current	I _{sc} (A)	1.74	1.75	1.75	1.75	1.78	1.79
Bypass Diode	None	Maximum System Voltage	V _{ms} (V)	1500 V / (3000 UL)					
Cell Type	Thin-film CdTe semiconductor, 216 active cells	Limiting Reverse Current	I _r (A)	4.0					
		Maximum Series Fuse	I _{sc} (A)	4.0					
		MODULE NUMBERS AND RATINGS AT 800W/m², NOCT TM 45°C, AM 1.5 ¹							
Frame Material	None	Nominal Power (± 5%)	P _{max} (W)	78.3	80.1	82.0	83.9	85.8	87.6
Front Glass	3.2mm heat strengthened Series 4A TM includes anti-reflective coating	Voltage at P _{max}	V _{max} (V)	62.6	63.1	64.1	65.0	65.5	65.9
		Current at P _{max}	I _{max} (A)	1.25	1.27	1.28	1.29	1.31	1.33
		Open Circuit Voltage	V _{oc} (V)	81.0	81.6	82.3	82.6	82.7	83.1
Back Glass	3.2mm tempered	Short Circuit Current	I _{sc} (A)	1.40	1.43	1.43	1.41	1.44	1.44
		TEMPERATURE CHARACTERISTICS							
Encapsulation	Laminate material with edge seal	Module Operating Temperature Range	(°C)	-40 to +85					
		Temperature Coefficient of P _{max}	β _p (P _{max})	-0.34%/°C					
		Temperature Coefficient of V _{oc}	β _v (V _{oc})	-0.29%/°C					
		Temperature Coefficient of I _{sc}	β _i (I _{sc})	+0.04%/°C					

SUPERIOR TEMPERATURE COEFFICIENT



MECHANICAL DRAWING



END-OF-LIFE RECYCLING

- Recycling services available through First Solar's industry-leading recycling program or customer-selected third party.

Footnotes

The information included in this Module Datasheet is subject to change without notice and is provided for informational purposes only. No contractual rights are established or should be inferred because of user's reliance on the information contained in this Module Datasheet. Please refer to the appropriate Module User Guide and Module Product Specification document for more detailed technical information regarding module performance, installation and use.

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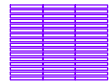
1. Testing Certifications/ Listings pending.
2. Device package meets ATLAS 25x.
3. Limited power output and product warranties subject to warranty terms and conditions.
4. Ensures 97% rated power in 1st year, -0.7%/year through year 25.
5. Standard Test Conditions (STC) 1000W/m², AM 1.5, 25°C
6. All ratings ±10%, unless specified otherwise. Specifications are subject to change.
7. Application Class A for 1000V (class B), Applied in Class B for 1500V (class C)
8. Nominal Operating Cell Temperature: Module operation temperature at 800W/m² irradiance, 20°C air temperature, 1m/s wind speed.
9. Multi-Contact MC4 (P/N:4114/PV-4BT4)

Plot Date: Meridian - Layout - (2016-12-20).dwg 2/15/2017 3:31:12 PM

LEGEND



1 MWDC



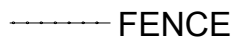
5 MWDC



FLOOD
PLAIN

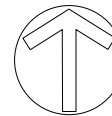
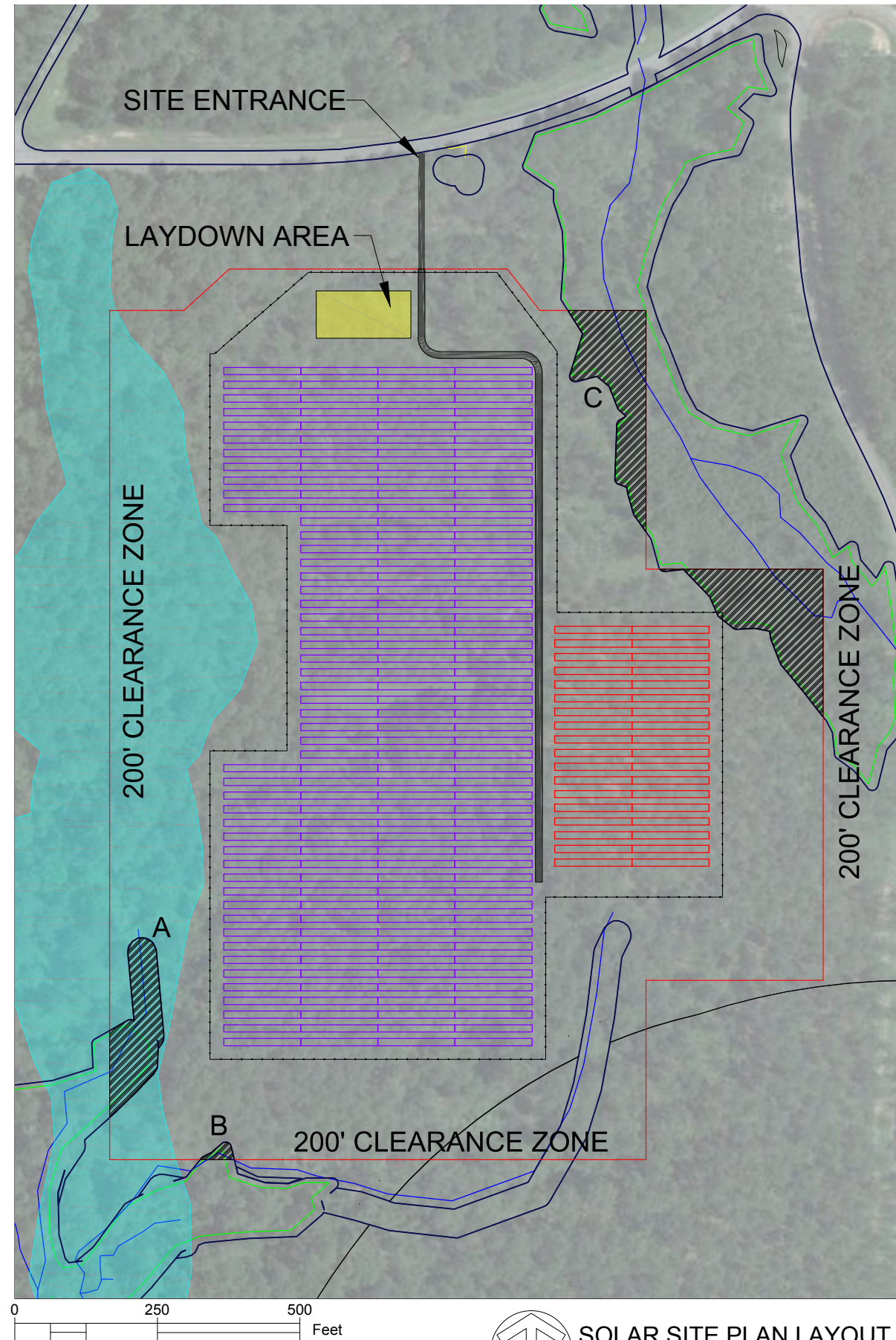


12' ROAD



FENCE

ACREAGE	
ITEM	ACRES
SOLAR PLANT LAND USE	20.78
TREE CLEARING AREA (NON-WETLANDS)	33.20
TREE CLEARING AREA (WETLANDS)	5.01
ROAD	0.35
TOTAL LAND USE	38.21



SOLAR SITE PLAN LAYOUT
MERIDIAN NAS



McCarthy

6225 North 24th Street, Suite 200
480-449-4700 480-449-4747 Fax
www.mccarthy.com

SILICON RANCH

MERIDIAN SOLAR LAYOUT (1500 V) MERIDIAN NAS

Drawn By
SCJACKSON

Date
2/15/2017

Sheet Number

L01